



# Transportation Synthesis Report

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## Fraud and Collusion Detection Systems, V.2

*Prepared for*  
**Construction and Materials Support Center**

*Prepared by*  
**CTC & Associates LLC**  
**WisDOT Research & Communication Services**  
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*Transportation Synthesis Reports are brief summaries of currently available information on topics of interest to WisDOT technical staff. Online and print sources for TSRs include NCHRP and other TRB programs, AASHTO, the research and practices of other transportation agencies, and related academic and industry research. Internet hyperlinks in TSRs are active at the time of publication, but changes on the host server can make them obsolete.*

### **Request for Report**

The Construction and Materials Support Center at the University of Wisconsin–Madison requested an update of our December 2002 report on Fraud and Collusion Detection Systems. A specific effort to identify new documents or Web sites pertinent to the state of the practice was requested.

### **Summary**

National agencies have expanded the information they make available to assist state DOTs, including new fact sheets and guidelines since 2002. Current practices include the use of analytical software and diversely trained personnel to evaluate contracting results for collusive or fraudulent practices. U.S. DOT's Office of the Inspector General continues to provide guidance on fraud detection, as well as on appropriate enforcement action.

Central to efforts to manage fraud and collusion detection is AASHTO's software product Trns•port, which offers a module for fraud and collusion detection. A handful of new agencies have joined the list of Trns•port users, though it remains unclear which use the collusion detection module. The software module focuses on monitoring the contracting process for indicators of fraudulent activity. Leading states like Ohio, Virginia and North Carolina use this software as one tool of many in the fraud detection process.

Below we give information on the 2006 Fraud Prevention Conference scheduled for next week, review the Trns•port tool for fraud detection, and identify Web sites and reports from national transportation agencies. We then offer information on three states that use the AASHTO software as part of a fraud detection process. Finally, we identify documents, committees and states with further information on fraud detection.

### **Biannual Transportation Fraud Conference**

A joint effort of the U.S. DOT OIG and AASHTO, the **National Fraud Prevention Conference on Transportation Infrastructure Programs** is days away in Orlando, Fla., April 24 to 27.

**Agenda.** The full agenda has been posted, and includes case studies, construction industry perspectives, agency actions following Hurricane Katrina, and more.

<http://www.topnet.gov/documents/442006FraudConferenceAgenda.pdf>

**Registration.** Registration remains open at the conference site.

<http://www.topnet.gov/documents/2006FraudConferenceRegistrationBrouchure01192006.pdf>

**Contacts.** Trindal Stanke, AASHTO, 202-624-3693 or [Tstanke@aaasho.org](mailto:Tstanke@aaasho.org). Barbara Barnet, U.S. DOT OIG, 305-716-3122 or [Barbara.Barnet@oig.dot.gov](mailto:Barbara.Barnet@oig.dot.gov).

## **Trns•port**

Transportation agencies use this AASHTOWare product to manage preconstruction and construction contract information. Trns•port includes 13 modules, each with specialized applications. The module designed for collusion detection is the BAMS/DSS Module.

**BAMS/DSS Module.** <http://aashtoware.org/?siteid=28&pageid=94>. This module was designed for collusion detection and bid monitoring. Its fraud and collusion monitoring capability includes project planning, estimation, contract award, and contract administration applications.

**Trns•port User's Group Site.** <http://tug.cloverleaf.net/>. Membership in the user's group includes 38 states, Washington, D.C., the province of New Brunswick, Canada, and the Republic of the Philippines. Wisconsin DOT is a member, and David Castleberg is WisDOT's representative on the user's group. Contact: David Castleberg, 264-7606 or [david.castleberg@dot.state.wi.us](mailto:david.castleberg@dot.state.wi.us).

**Info Tech.** This Florida-based IT company developed the software for AASHTO. See their Web site at <http://www.infotechfl.com/>; see details on Trns•port at [http://www.infotechfl.com/software\\_solutions/trns-port.php](http://www.infotechfl.com/software_solutions/trns-port.php).

**Contact.** Charles J. Conley, AASHTO, Trns•port Project Manager (in Aurora, Colo.), 720-514-9259 or [cconley@ashto.org](mailto:cconley@ashto.org).

## **FHWA**

FHWA addresses matters of fraud and collusion in highway projects through two principal means. The first is through the Contract Administration Course curriculum. The manual for this course addresses bid-rigging and fraud practices and their management and identification as a part of the contract administration process. The second is by working with the U.S. DOT Office of the Inspector General to identify fraud and collusion signs and initiate charges upon state recommendation.

**FHWA Contract Administration Core Curriculum Participant's Manual and Reference Guide 2005.** This manual frequently addresses methods and practices designed to detect and counter fraudulent and collusive practices like bid rigging. The manual is used in the FHWA's Contract Administration Course. See a March 2004 feature in FHWA's *Focus* at <http://www.tfhr.gov/focus/mar04/04.htm>, and the guide's Web site at <http://www.fhwa.dot.gov/programadmin/contracts/coretoc.htm>. Highlights include:

- **Debarment in Pre-Bid Stages.** This addresses appropriate approaches to contractors with fraudulent or collusive histories, including in bidding activity in other states. It includes reasons for executing debarment, opportunities for hearings, and more. See section I.E, Debarment, of <http://www.fhwa.dot.gov/programadmin/contracts/ashtobid.htm>.
- **Post-Award Review to Identify Bid Rigging.** This section of Chapter III focuses on post-award procedures, and its first subsection addresses using these reviews to identify bid rigging. See Chapter III B at [http://www.fhwa.dot.gov/programadmin/contracts/cor\\_IIIB.htm](http://www.fhwa.dot.gov/programadmin/contracts/cor_IIIB.htm).

## **Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation, Jan. 2004**

<http://www.fhwa.dot.gov/programadmin/contracts/ta508046.htm#7>

This guide includes a section on debarment similar to that in the contract administration curriculum.

## **FHWA Briefing: Fraud Prevention – Suspension/Debarment, Feb. 28, 2002.**

<http://www.fhwa.dot.gov/construction/washto02/fraud.htm> (last updated March 11, 2005)

Drawing on OIG materials, this briefing groups types of fraud into the following categories:

- Cost Mis-Charging for Materials and Labor, including intentional underestimation of costs during the bid-submission process.
- Specifications that favor certain contractors.
- Conflicts of Interest, including firms hired to develop specifications that enjoy close affiliations with certain contractors.
- Collusive Bidding and Price Fixing, signaled by repeated awards of contracts, alternating high and low bids from the same contractor.
- Questionable Documentation from Contractors, including altered records, falsified prequalification documents, and false DBE status.
- Production Substitution, including mislabeling and misusing products, and substituting unapproved for approved products.

### **Preclusion, Suspension and Debarment Web Sites**

<http://www.fhwa.dot.gov/programadmin/contracts/sdlinks.htm>

This Web page links to sites from 12 state transportation agencies that include regulations on suspension and debarment, in some cases lists of debarred contractors, and more. Another site that links to states' debarment lists is <http://topnet.gov/StateDebarmentLinks.jsp>. Not all states update their lists regularly, but many do. For a full list of U.S. DOT personnel to contact regarding suspension and debarment, see <http://www.dot.gov/ost/m60/grant/dotcont.htm>.

**Contact.** Jerry Yakowenko, 202-366-1562 or [gerald.yakowenko@fhwa.dot.gov](mailto:gerald.yakowenko@fhwa.dot.gov).

### **Office of the Inspector General, U.S. DOT**

<http://www.oig.dot.gov/>

The OIG conducts a biannual conference on fraud prevention for transportation infrastructure agencies. It also offers a variety of manuals and guidance on who to call if such activity is suspected, what forms fraud and collusion may take in highway projects, and more. The Web site includes press releases on investigations of fraud and collusion.

### **The Reporting and Detecting of Fraud**

<http://www.fhwa.dot.gov/programadmin/contracts/fraud.htm>

This FHWA fact sheet describes various forms of fraud and collusion typical on highway projects, and provides contact information for OIG fraud coordinators and regional offices. Forms of fraud identified include:

- Conflict of Interest.
- Collusive Bidding and Price Fixing.
- Questionable Documentation from Contractors.
- Production Substitution.
- Cost Mis-Charging for Materials and Labor.

### **Fraud Awareness Handbook**

[http://www.usaid.gov/oig/hotline/fraud\\_awareness\\_handbook\\_052201.pdf](http://www.usaid.gov/oig/hotline/fraud_awareness_handbook_052201.pdf)

This 2003 guide addresses fraud in government contracts, and includes lists of fraud indicators, warning signs, descriptions of fraud schemes, and guidelines on detecting fraud.

**Nearest OIG Regional Office.** 111 N. Canal Street, Rm. 677, Chicago, IL 60606. Audits, 312-353-0104; Investigations, 312-353-0106.

### **AASHTO**

AASHTO approaches matters of fraud in highway contracts through three subcommittees.

#### **Subcommittee on Construction – Contract Administration Section**

<http://construction.transportation.org/?siteid=58&pageid=736>

This committee's fraud prevention efforts focus on the use of OIG guidelines, and on sharing debarment or suspension lists of contractors who have committed fraud or collusion against any member state transportation agency. Note the technical section membership list, which includes some of the contacts in this report, at <http://cms.transportation.org/sites/construction/docs/SOC%20Tech%20Section%20Assignments.XLS>.

#### **Subcommittee on Internal/External Audit**

<http://audit.transportation.org/community/audit/site.nsf/homepage/overview?opendocument>

This subcommittee focuses on accounting practices, one byproduct of which is the identification of fraudulent or collusive behavior. This is the AASHTO arm involved in the National Fraud Prevention Conference.

#### **Subcommittee on Civil Rights**

While this subcommittee does not have its own Web page, we believe it was responsible for the 2004 AASHTO Civil Rights Conference. At that conference Sharon M. Taegel, Missouri DOT's Disadvantaged Business Enterprise Program Coordinator, gave a presentation on DBE fraud that focused on U.S. DOT OIG cases and state practices in Missouri DOT. (It appears that this position at MoDOT is now held by Lester Woods, Jr.) See the presentation at <http://www.fhwa.dot.gov/civilrights/2004workshops/11taegel.htm>. **Contact:** Lester Woods, Jr., External Civil Rights Administrator, [lester.woodsjr@modot.mo.gov](mailto:lester.woodsjr@modot.mo.gov) or 573-751-2859.

## **Ohio**

Although Ohio is a leader in fraud detection practices, the ODOT Web site does not offer specific direction on which ODOT office manages detection, prevention or action on fraud and collusion in highway construction. However, Ohio DOT's Office of Estimating uses the BAMS/DSS module of Trns•port in a collusion detection process that includes various analytical tools and a diversely skilled personnel team.

**Analytical Approach.** Inspired by BAMS/DSS, the department uses standard research—Web, library, personal contacts—and data analysis with tools including BAMS/DSS, statistical software called SAS, GIS software by GEOMedia, and desktop data management software.

**Personnel Team.** Currently three analysts with backgrounds in applied economics, econometrics, civil engineering, business finance, and data management work under ODOT direction as well as independently of upper management in pursuing lines of inquiry that emerge from its analytical process.

**Contact.** Jeff Hisem, Office of Estimating, 614-644-6388 or [Jeff.Hisem@dot.state.oh.us](mailto:Jeff.Hisem@dot.state.oh.us).

## **Virginia**

Virginia DOT's Office of Inspector General deals with fraud and collusion in highway construction. The specific unit involved is the External and Construction Audit Division, which evaluates contracts via audits of contractors and consultants. The Investigation Division, which works on deterrence and detection, investigates potential attempts by contractors, subcontractors and employees to defraud Virginia DOT. According to FHWA, Virginia DOT employs the BAMS/DSS module of Trns•port in this effort.

**External and Construction Audit Division,** <http://www.virginiadot.org/business/bu-externalAudit.asp>. Contact: Judson Brown, Director, 804-225-3597 or [Judson.Brown@vdot.virginia.gov](mailto:Judson.Brown@vdot.virginia.gov).

**Investigation Division,** <http://www.virginiadot.org/business/bu-investigation.asp>. Contact: Ronald Marker, Acting Division Administrator, 804-786-2352 or [Ron.Marker@VDOT.Virginia.gov](mailto:Ron.Marker@VDOT.Virginia.gov).

## **North Carolina**

According to FHWA, NCDOT uses the BAMS module for collusion detection. While the NCDOT Web site does not appear to include material devoted to fraud and collusion detection in highway construction, there is a PowerPoint presentation on fraud and bid rigging from NCDOT on the AASHTO Web page for the Construction Committee's Subcommittee on Contract Administration.

**Ethics of Preparing, Awarding, and Administering Department of Transportation Contracts**  
[http://cms.transportation.org/sites/construction/docs/2003 Fraud Bid Rigging Ethics SOC.ppt](http://cms.transportation.org/sites/construction/docs/2003%20Fraud%20Bid%20Rigging%20Ethics%20SOC.ppt)

In this 2003 PowerPoint presentation, engineer Steve DeWitt describes fraud and bid rigging in North Carolina, citing specific cases and charges since the 1920s, and bid rigging by three companies that owned half the state's asphalt plants.

**Contact.** Steve DeWitt, PE, 919-715-4458 or [sdewitt@dot.state.nc.us](mailto:sdewitt@dot.state.nc.us).

## **Other Sources**

The following documents and agencies offer information on current practices with regard to fraud and collusion.

### **NCHRP Synthesis 343 – Management of Disadvantaged Business Enterprise Issues in Construction Contracting**

[http://trb.org/publications/nchrp/nchrp\\_syn\\_343.pdf](http://trb.org/publications/nchrp/nchrp_syn_343.pdf)

In a brief look at fraud trends on page 27, the study notes that between 1999 and 2003, the five-year average for DBE companies being involved in fraud cases investigated by the U.S. DOT Office of the Inspector General was 20%. However, this proportion has been climbing steadily, from a low of 6% in 1999 to a high of 29% in 2003. The most common DBE fraud schemes were:

- Front or sham companies—false representation of ownership and control.
- Conduit companies—prime contractor indicated the DBE did work it didn't do.
- False eligibility—the DBE misrepresents qualifying criteria, like profits.

**TRB Committee on Contract Law (AL030)**

[http://trb.org/directory/comm\\_detail.asp?id=2060](http://trb.org/directory/comm_detail.asp?id=2060)

This committee focuses on the legal aspects of contracts with transportation agencies, with a focus on contracting for construction and maintenance of highways and highway-related projects, including prequalification, bidding, and post-contract adjustment.

**Contact.** James McDaniel, TRB Staff Representative, 202-334-3209 or [jmcdaniel@nas.edu](mailto:jmcdaniel@nas.edu).

**Iowa.** [http://www.dot.state.ia.us/contracts/dbe\\_program.pdf](http://www.dot.state.ia.us/contracts/dbe_program.pdf). Iowa's document on its DBE Program, written in 1999 and revised in September 2004, discusses fraud issues in Subpart F: Monitoring, Compliance, and Enforcement (pages 26–28 of the PDF), and on pages 34 and 43 of the PDF.

**Kentucky.** Since our 2002 report, the Kentucky Transportation Cabinet's Office of Inspector General has put up a Web site at <http://transportation.ky.gov/oig/>. Kentucky Transportation created the OIG in May 2002 in response to an extortion and DBE scandal on a bridge maintenance project. It is devoted to internal fraud detection and protection, with a focus on procurement fraud, false claims, kickbacks and bribes. The report we referenced in our 2002 TSR is no longer available online.